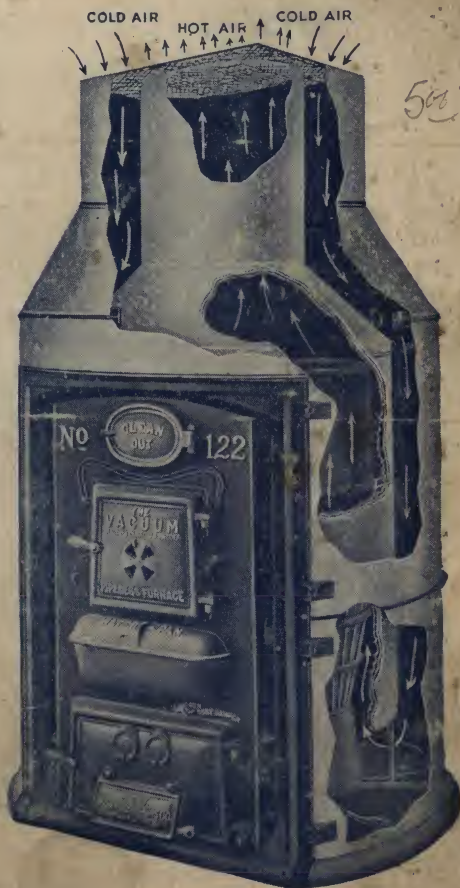


THE "VACUUM"

(Trade Mark Registered, U. S. Pat. Office, No. 101202)

THE PIONEER PATENTED PIPELESS FURNACE



Protected by U. S. Patents Nos. 1165122--1171245

ROGERS & SUTHERLAND, AGENT,
WAGGONER, ILL.

Warm Air Heating

Simplified, Modernized and Made Dependable and Economical

*A Remarkable Forward Stride in
the Science of Ventilating and Heating*

THE VACUUM is the pioneer pipeless or one register furnace. For eight years we have led the field. Thousands are installed in every state throughout the middle west and northwest. Our wide experience has enabled us to perfect this style of heating plant to a degree not reached by any imitator or competitor.

INSIST ON THE VACUUM



Less Cost

Less Fuel

Less Fire Risk

More Heat

More Ventilation

More Satisfaction

The Vacuum Furnace

(Trade-Mark Reg.)

EMBODIES the most advanced and most practical ideas in heating plants of a generation. The ideal furnace for a new home, or it may be installed in an old house without marring or cutting the walls or weakening the construction.

THE VACUUM

(Trade-Mark Reg. U. S. Pat. Off.)

BURNS successfully either hard coal, soft coal, coke or wood, or can be equipped to burn gas or oil.

MANUFACTURED EXCLUSIVELY BY

MORRILL-HIGGINS CO.

Main Office and Sales Headquarters

1112 Douglas Street

OMAHA - - - NEBR.

Foundry located at Belleville, Ill.

Address all communications to Omaha office }

PROSPECTUS

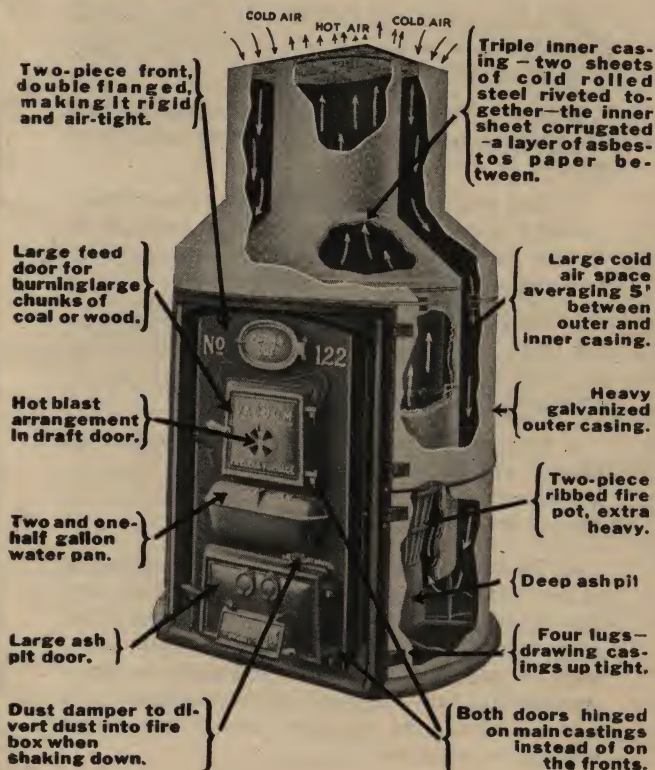
In the Vacuum Furnace we have constructed a warm air heating plant that will both heat and ventilate thoroughly in a practical, economical and satisfactory manner almost any type of house, store, church or school. The peculiar construction of the Vacuum enables us to heat your building by using only one combination hot and cold air register placed directly above the furnace. The register is made in two compartments, one which carries the cold air to, and the other which carries the warm air from, the furnace. The outside or open work border, acts as the cold air register, taking the cold air in passing it downward between the two casings (which encircle the entire furnace), then passing it under the bottom of the inner casing, thence upward around the fire pot and radiator dome which heats and throw it out of the center of the register in great volume See illustration of sectional view of furnace, page 5.

As the cold air passes downward between the two casings it takes up or absorbs the heat which is wasted by cellar radiation in all pipe style furnaces. In this point, alone, the Vacuum will save a big percentage of your fuel and in addition, give you a cool cellar storage very necessary and desirable if you wish to store fruits and vegetables. Then, again, every particle of warm air is discharged into your rooms above without the loss of one degree of its heat and quickly circulates all over your house. With a pipe style furnace this air is conducted through pipes running up between the partition walls and fully fifty per cent of its heat is wasted between the walls and in the cellar before the air ever reaches the rooms. Why heat the cellar and the air space between the plastered partition walls of your home? This is absolute waste of at least one-third to one-half your fuel and brings you no returns or benefit.

The Vacuum principle merely takes advantage of Nature's never failing law of gravitation. Cold air is heavier than warm air—as a result the warm air rises and searches out the farthest and coldest corners of your house and the cold air is drawn down the cold air register, heated and returned to the rooms. You do not need pipes to do this. Warm air rises and will circulate and penetrate wherever there is an opening and as it becomes cooled it quickly finds its way back to the cold air register intake from any part of the house upstairs or down. This combined system of circulation and ventilation continues as long as any fire remains in the furnace—a mild, but continuous motion of air through the entire house, thereby insuring an evenness of temperature and

freshness of air at such reduced cost when compared with the old system that you are not only more than satisfied, but enthusiastic about it. (We make this statement advisedly as our satisfied and enthusiastic patrons are our biggest asset and have sold thousands of Vacuum furnaces for us through their recommendations.)

Upstairs rooms are thoroughly and satisfactorily warmed if there is an open stairway or by placing a ceiling register if the stairway is enclosed.



The above illustration shows the inside construction of the Vacuum Furnace. Note that the Vacuum is solid and substantially built throughout. The castings are of extra heavy gray iron. The outer casings are of heavy galvanized iron, the inner casings of two sheets of cold rolled steel, bolted together; the inner sheet being crimped and between the sheets a layer of asbestos paper. There is no better built furnace on the market at any price.

Note also the Vacuum principle.—As soon as a fire is started in the fire-pot the air surrounding the

radiator is heated and rises to the rooms above. Cold air is rapidly drawn down from the rooms to replace and this circulation is rapid and continuous as long as any fire remains

SUPERIOR POINTS OF THE VACUUM FURNACE

Our many years experience in the pipeless furnace field and the wide distribution of our heating plants has enabled us to make a study of all conditions to be met and to turn out a furnace that will give the maximum of comfort to the purchaser and long years of satisfactory service.

In comparing the VACUUM with other so-called pipeless furnaces please note a few of the many points in which it excels.

1. Larger Feed Door.—Making it easier to feed the fire and enabling you to burn large chunks of wood or other fuel.

2. Feed and Ashpit doors fastened to the castings instead of the fronts. This insures tight fitting doors always, as the fronts are liable to warp or buckle from heat and the weight of the doors.

3. Waterpan located underneath the feed door in the front. Capacity $2\frac{1}{2}$ gallons an increase of 200 per cent insuring you proper humidity in the air circulated. Very essential to good health.

4. Two-piece fire pot which allows greater expansion without cracking or warping when the furnace is heavily fired. This adds years to the life of the fire pot which is the heart of the furnace.

5. Thoroughly insulated inner casing consisting of two sheets of heavy cold-rolled steel all the way up—the inner sheet being crimped or corrugated to make dead air space, and bolted to the outer sheet with a layer of asbestos paper between the sheets covering the entire surface. This insulated inner casing improves the circulation greatly both in the cold and warm air sections.

6. Larger cold air space between the inner and outer casings giving better movement of cold air and obviating floor drafts and cold floors. This space is approximately five inches.

7. Larger space between the radiator and inner casing preventing baked or scorched air being delivered to the rooms above and increasing the life of both the inner casings and castings. The space between the outside of the radiator and inner casing is approximately four inches between the fire pot and inner casing six and one-half inches.

8. Hot blast draft arrangement in the feed door assuring better fuel combustion.

9. A dust damper in the ash-pit opening into a tube connecting with the fire-pot to carry the dust into the combustion chamber when shaking the grates. You do not ruin your clothes or fill the basement with dust when shaking down.

10. Two-piece front, double flanged, running up even with the top of the radiator making the work of setting up the furnace much easier and the construction stronger and more rigid.

11. The triangular grate bars are of an improved pattern, heavy and substantial, which will greatly lessen breakage. While we have mentioned this feature last in point of importance, it might be first, as the heaviest wear and tear in a furnace is on the grates, and it is some comfort to know you have a grate designed to give real lasting service.

CONSTRUCTION

Vacuum Furnaces are constructed on correct scientific principles under the direction of experienced heating engineers who know the difficulties that are encountered in heating all kinds of buildings. In design, they are neat, attractive and well proportioned. The materials used in their manufacture are the very best and each furnace is mounted and fitted with the greatest care before shipping.

BASE

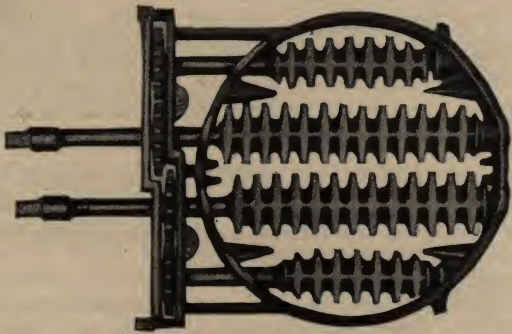
Cast in one piece on the 122 and 124 sizes. In two pieces that bolt together perfectly in the 126 size. This latter size being large, we have made it in two pieces to obviate trouble in getting it into the ordinary door opening in some basements. The base forms a perfect support for the furnace and casings and is set in cement to make it rigid when installing the furnace.

ASH PIT

Is a heavy casting extra deep, fitted with cup joints to prevent the escape of dust into the air chamber. The door opening is large to allow for removing and replacing the grates intact without disturbing any part of the furnace.

GRATES

Are an improved pattern of the triangular bar revolving style. Cast extra heavy in the center where the strain comes and where breakage usually occurs. The complete grate can be taken out or put in the furnace in a moment's time or individual bars can be quickly replaced. The grate frame rests on



two lugs cast in the rear of the ash-pit and is held up in position by two hooks in the front. The grate can be dropped in front to clean out clinkers without removing it from the ash-pit and quickly swung up into position again.

FIRE POT

Two-piece fire pot of extra heavy construction, corrugated and ribbed for additional radiating surface. Fitted with deep cup joints. The two piece



fire pot is an improvement over the one piece pot as it allows for contraction and expansion thereby increasing the life of this casting many years.

FEED SECTION AND COMBUSTION DOME

Extra heavy and extra deep to allow thorough combustion of fuel gases. Corrugated for extra radiating surface. This section is also arranged that a water coil can be placed in the furnace at any time without interfering with the feeding of coal or without drilling or mutilating the furnace in any way.

RADIATOR

Radiators are of heavy cast iron and known as the return flue type so constructed that either hard or soft coal can be used and the utmost percentage of



heat abstracted therefrom. They are of large capacity and afford an immense radiating surface. The fire and smoke travel is indicated by the direction of the arrows and enters the radiator in the center dome from the combustion chamber, then divides, going on both sides completely around the radiator to the smoke exit. The front opening is for cleanout purposes and sealed with a metal cap that is easily removed and accessible.

WATER PAN

An extra large water pan of two and a half gallons capacity is set in the front below the feed door. This assures proper humidity and is a very essential good health feature.

FRONT

Two-piece front, double-flanged, heavy cast, of neat and pleasing design running from the base to the top of the castings in the furnace proper. The front is so arranged that both inner and outer casings fasten to same and fit perfectly tight and rigid. This is a feature that is greatly appreciated by the party installing the furnace as it gives a well finished job with a minimum of labor.

AN IMPORTANT POINT

In the improved model Vacuum Furnace the Feed Doors and Ash-pit Doors are hung on the main castings which extend flush with the front. This assures absolutely tight fitting doors at all times. Where these doors are hung on the front casting as is done by a great majority of our competitors there will always be trouble with leaky, loose fitting doors as the weight of the doors together with the heat will warp or spring the front in time. Our long experience has taught us the value of this improvement.

REGISTER

The Vacuum Combination warm and cold air register is placed in the floor directly above the furnace, usually in or between the most centrally located rooms in the house. It conducts the warm air from,



and the cold air to the furnace and makes possible the most forward stride in warm air heating ever known. Vacuum Registers are beautifully finished in oxidized copper and blend with the furnishings in the finest homes.

WATER COIL

The Vacuum Furnace can be fitted with a water coil at any time so that an abundant quantity of hot water can be produced at all times when a fire is in the furnace. This is not a regular part of the equipment, but can be furnished extra at small cost.

CASINGS

The outside casing of the Vacuum Furnace is made of heavy gauge galvanized iron. The inner casing is made of two sheets of cold rolled steel, bolted together, the inner sheet crimped to allow dead air space and a layer of asbestos paper between the two sheets all around. The inner casing hood is also two sheets with asbestos paper between right up to the top of the hood. This inner casing as constructed thoroughly insulates the cold air chamber and assures unimpaired circulation of the cold air, thereby obviating cold floors and floor drafts. The hoods of the casings are pitched at a steep angle to do away with friction and improve the air movement both to and from the furnace. We believe the Vacuum Casings as now constructed, the best, most practical and most scientific on the market.

EASY TO INSTALL

The Vacuum Furnace comes complete ready to install. With each furnace we send a regulator and operating chains which extend from the furnace to one of the living rooms so that drafts may be operated without going to the basement.

Everything is included—bolts, screws, furnace cement, and an illustrated card of complete instructions for installing described step by step so that two men of ordinary intelligence can place it ready to operate in one day's time—the only tools required being such as are ordinarily found in any home viz: a saw, hammer, screwdriver, punch, cold chisel, etc.

GUARANTEE

We guarantee that the VACUUM FURNACE with our combination hot and cold air register, when properly installed, will heat and ventilate any House, Store, Church or School to 70 degrees Fahrenheit, with considerably less fuel than any other character of furnace yet in use.

If proven not to do so, we agree to rectify without further cost to agent or purchaser. We reserve the right to make a personal investigation, if necessary, on any complaint and if the trouble is due to improper installation, poor fuel, poor chimney, or other cause not traceable to the Furnace proper, the agent or purchaser will be held responsible.

MORRILL-HIGGINS COMPANY.

TO THE TRADE

The Vacuum Furnace is the pioneer one register or pipeless furnace. Eight years ago the Vacuum was introduced and was the first pipeless furnace to be marketed to dealers solely through the legitimate channels of trade. We have always backed our dealers with trade and publicity helps and protected them on exclusive territory allotment. The name "VACUUM" is our Trade Mark registered in the United States Patent Office, No. 101202. This name is being illegally used by many of our competitors in describing an imitation product which is proof positive that the Vacuum has established an enviable reputation. We intend to protect our rights and our name and will prosecute any competitor infringing thereon if brought to our notice.

The Vacuum Furnace is also protected by United States Patents Nos. 1165122-1171245, covering vital improvements. When you handle the Vacuum you are in class 1A in the pipeless furnace business.

MEASUREMENTS AND ESTIMATED CAPACITIES

Estimated Heating Capacity in Cubic Feet	Shipping weight Complete	Size of Feed Door . . .	Depth of Ash-pit.	Size of Ash-pit Door . .	Height of Castings	Diameter of Casing . . .	Diameter of Fire Pot. . .	Size of Register	Furnace Number . . .
10000-18000	1300	11 1/2 x 13 3/4	12 11 1/2	12 x 19	47	46	22	24 1/2 x 30	122
18000-30000	1500	13 x 14	14 13	12 1/2 x 20 1/2	51	50	24	28 1/8 x 30 1/8	124
30000-45000	1800	14 1/2 x 16	15 14	12 3/4 x 25	54	54	26	32 x 32	126

No. 122—Designed to warm 4 to 6 room houses also small stores.

X No. 124—Designed to warm ordinary to large residences six to eight rooms—stores 40 to 80 feet long.

No. 126—Designed to warm large stores, ordinary halls, school houses, churches and residences eight to twelve rooms.

DRAFTS

To those contemplating building we would say that an 8x12 chimney is the smallest that should be built for any heating apparatus, not because it will always require that size chimney for the combustion of the fuel, but to give a practical magnitude for roughness, want of cleaning, etc., and there should be no other opening in it save the door for the removal of soot. Care in building a chimney is necessary. The inside should be with clear-cut joints, or plastered smooth, as it will then give a much better draft. Offsets should be avoided; parallel sides are the best. Where furnace flues and fireplace flues are in the same chimney, care should be taken not to run the flues together; keep them separate to extreme top of chimney. Smoke or vent flues should always be kept separate by partitions to the extreme top.



PERTINENT POINTS

It costs less to install a Vacuum Furnace.

There is no risk of fire with a Vacuum.

The fuel bill to run a Vacuum is from one-third to one-half less than for an ordinary pipe furnace and you get more heat in the rooms where you need it.

The Vacuum has no hot air pipes nor cold air flues—it wastes no heat in your cellar—it does not damage your cellar storage.

The Vacuum is located in the cellar or basement, giving you the full space of every room for living purposes.

The Vacuum will take the place of three or four Base Burners or stoves—do away with the smoke, dirt and ashes in your living rooms—give you more heat at less expense for fuel.

The lady of the house is entitled to the added comfort of the Vacuum.

In constructing a new house, always remember there will be extra cost for heavier studding to make room for pipes to run between the walls. This can be eliminated by installing a Vacuum.

The Vacuum can be installed in a new or old house in one day. It modernizes the old home and gives the new one a perfect heating plant.

HEATED AIR EXPANDS and rises. Cold air contracts and descends. These are nature's laws. You do not need pipes to conduct heat to different rooms. Heated air will circulate and penetrate wherever there is an opening—through doorways, transoms or ceiling registers.



The Vacuum Circle

The light arrows denote the warm air

NOTE the absence of pipes in the basement. The insulated casing gives you a cool cellar storage that is very desirable. Your rooms above are not filled up with stoves or base-burners and the dirt, dust and ashes accompanying them.

Over 20,000 Vacuum
Every Owner

THE VACUUM FURNACE works under a scientific and perfectly balanced system of air circulation. It draws the cold air from the farthest room in your house, replacing it with heated air. This gentle yet certain circulation lasts as long as there is a particle of fire in the firepot.



ulation Principle

and the black arrows the cold air.

NOT ONLY is the first cost of installing the VACUUM FURNACE more moderate than most heating plants, but it will pay you a dividend in fuel saving each year and give you great comfort and absolute satisfaction.

Furnaces Installed
Enthusiastic

HERE'S WHAT A FEW SAY

**It Is Not Sentiment or Theory, But Actual
Experience That Counts.**

"Much to my surprise, found it perfectly satisfactory, even heat throughout eight-room house in coldest weather."

F. J. BLAIR, Lake Park, Iowa.

"Have been surprised at results, eight-room house—have no trouble heating any of it."

J. W. MAGNEY, Nehawka, Neb.

"Have used a good many different kinds, but think the Vacuum far ahead of any that I have used."

H. F. TALLMADGE, Benson, Neb.

"No trouble when 12 degrees below zero to heat most distant rooms of nine-room house to 70 degrees."

J. A. SPENCER, Barneston, Neb.

"Furnace heats entire two-story house to perfect satisfaction."

MELICK & TROWBRIDGE, Elgin, Neb.

"Has given great satisfaction as to heating and economy. It has done all you claimed for it."

DR. W. J. DOUGLAS, Atkinson, Neb.

"It is giving perfect satisfaction and heating the church in good shape."

A. A. AKERSON, Sec'y,

St. Joseph Swedish Luth. Ch., White Rock, S. D.

"Weather at 36 degrees below zero, furnace fulfills every claim made for it."

CONRAD WALKER, North Platte, Neb.

"Has been perfectly satisfactory in every way and fully met claims for my nine-room house in most severe weather."

J. P. CRUICKSHANK,

4628 Capitol Ave., Omaha, Neb.

"It is doing fine. Have had 20 degrees below zero, no trouble to keep things comfortable."

W. D. CANNELL, Waterloo, Neb.

"Money could not buy it if couldn't get another. Heats house above and below in perfectly satisfactory manner."

C. M. HUMMELL,

2419 Decatur St., Omaha, Neb.

"Can cheerfully recommend it to any one wishing a thoroughly warm house in zero weather."

JOHN GILCHRIST, Red Oak, Iowa.

"Gives good satisfaction and is very economical in fuel."

M. M. CLINE, Bradshaw, Neb.

"Satisfactory and economical in our store."

E. G. DOVEY & SON, Plattsmouth, Neb.

"Twelve-room house, seven below and five above. No trouble in getting heat."

W. W. WALKUP, York, Neb.

"More satisfactory heat than ever before."

S. S. BEEM, Council Bluffs, Iowa.

"Heated my 10 room house in good shape. Proved to be just what they said it to be."

JOHN A. ADELSON, Clarks, Nebr.

"Heated our house fine."

MRS. JOHN WOODWORTH,
1920 South 34th St., Omaha, Nebr.

"Works fine. Want two more in new houses on Vinton street."

H. S. SCHOENEN,
1021 North 21st St., Omaha, Nebr.

"Both the one in my own house and that in father's, John Pospichal, Sr., perfectly satisfactory."

M. F. FITL, 1516 So. 24th St., Omaha, Neb.

"Must say it has exceeded our expectations. We are well suited so far."

H. GRISWOLD, Cooper, Iowa.

"Gave me good satisfaction."

E. E. HOPPE, Lincoln, Neb.

"Has taken the place of four stoves with no more fuel than one stove."

L. J. HOOKER, Carson, Iowa.

"Have had it two years. Well satisfied with it."

L. B. SHELEY, Murphysboro, Ill.

"Would not part with mine at any price if could not get another."

WALTER HOOD, Beardstown, Ill.

"Are all satisfied after using it two years. House comfortable at all times."

MRS. F. M. WOOD, Ohioa, Neb.

"Have been in heating business 30 years. Vacuum is far ahead of other heating plants. Would install no other. We use them in store rooms, dwellings and churches, and they give perfect satisfaction."

PETER GUSTLER, Onaga, Kans.

"Have had one two years, heating power unexcelled. If I was to put in another furnace would select the Vacuum without hesitation."

DR. D. McPHAIL, St. Joseph, Mo.

"Far less fuel in 12-room house than formerly used in two hard coal burners for only one floor. Couldn't find any weak points about furnace or its operation."

C. B. JENSEN, Oldham, S. D.

"Installed in 10-room house next to steam plant three years ago. Has heated better and more economically than steam plant did, ever since."

DR. V. B. BARCOFF, Litchfield, Ill.

"Have eight rooms which heated within two degrees of same temperature. It does more than they say it will."

R. E. LANDES, Chadron, Neb.

"More comfort than ever before in twenty years."

S. D. COE, David City, Neb.

"Have installed two, both giving excellent satisfaction. More than claimed for them."

M. P. SUITER, Norfolk, Neb.

"This furnace has given us splendid results."

MAUNE BROS., Union, Mo.

"Has heated our seven-room house perfectly when 12 degrees below zero."

MR. AND MRS. P. LAWLESS,
1809 South Spring St., Springfield, Ill.

"Delighted with it; heats house above and below in perfectly satisfactory manner."

JNO. P. HEWLETT, Richmond, Mo.

"Makes a good steady heat and is cleanest furnace I have ever seen."

RAY S. BASSETT, Paris, Mo.

"Glad to recommend it to anyone."

MRS. H. H. ALLEN,
1007 So. 36th St., Omaha, Neb.

"Well satisfied with furnace. Does all and more than I expected."

H. L. PARKER, Fargo, N. D.

"In every respect I am satisfied with the furnace up to date."

L. L. MILLER, Nome, N. D.

"Am highly pleased. I think they are a fuel saver."

J. H. SLEIGHT, Tappan, N. D.

"In every way satisfactory. It kept a nine-room house as warm as we wanted it during the time we had 46 below zero, and in my judgment I would take this furnace in preference to anything I have yet seen on the American market."

O. A. HONG, Cooperstown, N. D.

"When the weather has been 42 degrees below I had 70 degrees Fahrenheit."

WM. TRADER, Oriska, N. D.

"I know of no better heating proposition on the market."

C. W. POLLOCK, Fingal, N. D.

"The furnace cannot help but be good. The construction and principle are correct."

T. G. RAVELING & SON, Buffalo, N. D.

"At 40 degrees below zero we had no trouble in heating the house so you were comfortable anywhere."

A. H. MOEDE, Fingal, N. D.

"I cannot recommend the Vacuum Furnace too highly."

J. H. SHANNON, Cogswell, N. D.

"Putting in this furnace was the best investment that they have ever done for the church."

ANDERSON BROS., Kulm, N. D.

"Have had weather 38 degrees below zero, so far the furnace has done all that Mr. Johnson claimed for it."

L. C. CARVER, Lucas, N. D.

"Up to date the furnace has done all they claim for it. It is a fuel saver and heats the house very satisfactorily."

R. A. CANDOR, Cogswell, N. D.

"My conviction is that the system is good. We have five or six Vacuum Furnaces in this community and from what I have heard all of these give absolute satisfaction."

A. H. BERGER, Fort Ransom, N. D.

"It is very economical in coal."

R. E. KRATT, Sheldon, N. D.

"I have used the Vacuum Furnace for some time and it is satisfactory in every way."

C. A. ANDERSON, Nome, N. D.

"The furnace is as good as it is claimed to be. It heats the upstairs well and does not heat the cellar. We have the largest size and like it fine."

ALBRO BROTHERS, Brampton, N. D.

"I certainly would have nothing else for a one-story house."

A. O. BORDERUD, Hickson, N. D.

"I can say that works fine and gives perfect satisfaction in every respect. It is a marvel in simplicity and economy."

J. M. O. NESS, Perley, Minn.

"Will say that this one-pipe furnace is the only furnace that I would use. I have one that I am heating my five living rooms and also store building with."

JAMES NELSON, Nome, N. D.

"We have had a Vacuum Furnace installed in our church for three months. We are glad to state that it is highly satisfactory."

A. A. HALTER, Pastor M. E. Church,
Springfield, Mo.

"Have the largest dwelling in the city—13 rooms—some from 20 to 30 feet long, 16 to 20 feet wide, 13-foot ceilings. Have used hot air furnaces for the past 15 years. Never got heat in all of the house. Used 8 stoves. Your furnace seems to be perfect. Have taken out all of our stoves."

VINT N. GRAY, 4679 Walnut St.,
Springfield, Mo.

"I find my fuel bill at least one-third less than ever before. I prefer it in many ways to pipe furnace."

F. F. GARDINER, Newark, Mo.

"Can say that I am more than pleased. Another point in its favor is the small amount of fuel required to run it."

E. A. SYKES, La Belle, Mo.

"Discarded my old style hot air furnace which never proved satisfactory. Has been no time during coldest days the past winter when my residence was not well heated."

F. W. BONDURANT, La Belle, Mo.

"Far excels any other furnace I ever saw. The principle is absolutely correct. The great wonder is that someone did not 'catch on' years ago."

C. W. MULINEX, La Belle, Mo.

"Heats my six rooms to a good even heat. Economical in coal consumption and is very easily regulated."

JAMES DAWSON, 448 31st St., Ogden, Utah.

"Would not part with it at three times the price. Every room heated to an even temperature. Find that it purifies the air. Our health has been much better."

JAMES UHLE, 949 24th St., Ogden, Utah.

"Meeting house, 40x80. We have perfect heat all over the building, which was impossible to get from our common heaters. Also a great fuel saver."

C. A. UDY, Fielding, Utah.

"Economical, easy to regulate, heats and ventilates our five rooms to perfection."

JOS. HARRIS, 2958 Grand Ave., Ogden, Utah.

"Heats my large 10-room house to perfection in cold weather."

C. A. MALAN,
2804 Taylor Ave., Ogden, Utah.

"We can recommend it to anyone on account of its economy and the way it distributes the heat through the house."

MAX DAVIDSON,
653 21st St., Ogden, Utah.

"Has given entire satisfaction. We like it very much."

J. D. JOHNSON, Monticello, Mo.

"We are truly gratified and pleased with its success and we feel sure it is the coming heating plant for residences."

RALPH BAKER,
1893 9th East, Salt Lake, Utah.

"We believe this to be the heating plant of the generation. We find it very much more economical than stoves."

CITY DRUG STORE,
R. M. Thompson, Malad, Idaho.

"Six-room house, including bathroom, heated evenly and satisfactorily."

MRS. JOHN SWANSON,
971 24th St., Ogden, Utah.

"Have used it all winter with considerably less fuel than I burned in my stoves."

J. W. WILCOX, Grocer,
2843 Adams St., Ogden, Utah.

"Have tried hot water and hot air furnaces. Have found none compare with results obtained from using the Vacuum Furnace. Heats quicker, gives more heat and with less fuel than any of the others."

W. H. VORHIES, 917 24th St., Ogden, Utah.

"Very satisfactory and exactly what was represented."

THORVALD L. LARSON, Salt Lake City, Utah.

"It has not only proven all claimed for it, but has been an agreeable surprise to us."

THATCHER CLOTHING CO.,
By P. H. Thatcher, Logan, Utah.

"It has proven very satisfactory. Does away with unsightly, dirty stoves, and gives floor space where we most need it."

RITER BROS. DRUG CO.,
By B. F. Riter, Logan, Utah.

"Gives us entire satisfaction. Heats building 35x160 with 15-foot ceiling."

MURDOCK CANDY CO.,
By Robt. Murdock, Logan, Utah.

"Eleven-room house—no trouble in keeping every room warm and comfortable."

O. BORKMAN,
Cache Knitting Works, Logan, Utah.

"Used one winter in six-room house with entire satisfaction."

GOMER A. NICOLAS, Ogden, Utah.

"Very much pleased with Vacuum Furnace. Takes less fuel to heat same room. Two degrees cooler on second floor."

D. J. SMITH, M. D., Osceola, Nebr.

"We are satisfied with the one we have in our store."

MINSHALL HARDWARE CO.,

Logan, Iowa.

"Fuel saver and everything you claimed for it."

A. L. HODGE, Crawford, Nebr.

"Am surely well pleased with results of the Vacuum Furnace."

E. B. GLAZE, Mt. Sterling, Ill. .

"We do not hesitate to say that the furnace has done all that the company claimed for it."

BARNETT-GERHARDT-WINTERS CO.,

Clinton, Mo.

"Gives entire satisfaction."

M. B. HOOPER, Litchfield, Ill.

"If I could not get another like it, money could not buy it."

DR. N. B. PAYNE,

Lexington, Mo.

"We are well satisfied with it."

JAMES GRIEVE, Fargo, N. D.

"I we could not get another furnace of the same make we would not part with it on any consideration."

G. T. MILLER, Moorehead, Minn.

"We still like the furnace fine."

J. P. GREENHALGE, Trenton, Nebr.

"I am perfectly satisfied with my furnace."

A. O. BROWN, Hettinger, N. D.

"Will say that we are thoroughly satisfied with it."

DR. PAUL F. COLE, Ewing, Mo.

"We are more than pleased with ours and have recommended it to others."

GUS WRIGHT, 2318 Jefferson St., Ogden, Utah.

"I received one of your Vacuum Pipeless Furnaces in October, 1917. We have a six room house that was heated satisfactorily and will say that we are well pleased with the furnace—think it is the best one we ever used. I have had installed and used nine different kinds of furnaces and I consider this the best of all and take less fuel than the pipe furnace."

L. G. BIRD, Fort Morgan, Colo.

"The Vacuum Furnace you installed in my residence last winter has given me great satisfaction and meets every requirement."

PETER THAUT, Hastings, Nebr.

"Last winter just before the coldest snap we had during the entire winter we were fortunate enough to have a furnace installed in our house. It was one of your Vacuum Pipeless Furnaces. After it was all ready for business, I said to one of your men, 'wish we would get a cold snap now so I could try it out,' as I was in doubt of it heating the whole house. I did not have to wait long and it came twenty-two below zero, and it convinced me—it did the work, and it surely does not take much fuel—a small chunk would last until noon after the house was warm. As a heating plant for the small cost I do not think that it can be beat."

P. J. THIEL, Pastor Immanuel Cong'l Church,

Hastings, Nebr.

"We are highly pleased with the Vacuum Pipeless Furnace which you recently installed for us. We think it is one of the best and most economical furnaces now on the market."

C. L. BONHAM, Cashier,
Ayr, Nebr.

"One year ago I purchased two Vacuum Furnaces from you. During the past winter I had a good opportunity to try them. I am fully convinced they do not burn nearly as much coal to heat the same amount of rooms as an ordinary stove. The heating and ventilation are what I would consider perfect. Taking the fire risk into consideration, I claim there is none whatsoever. To say the least, they have given me perfect satisfaction and would be pleased to recommend them to anyone contemplating buying a furnace."

J. W. PROCTOR,
815 Williams Ave.,
Hastings, Nebraska.

"In answer to your inquiry regarding the Vacuum Furnace which I purchased from you last season, wish to advise that it is all we could ask. It is much more economical than any other furnace which I have installed at the present time, and will heat up much quicker, also being more sanitary. Our fuel economy is about 30% less than the other furnaces I have in two other properties in the city, figuring the same amount of floor space to be heated."

C. F. LIENHART, 727 No. Hewitt Ave.,
Hastings, Nebraska.

"The furnace was a 26-inch Vacuum Furnace to heat a nine room house. The coldest days we had last winter we didn't burn two coal pails of coal and the milder weather a small shovel of coal night and morning. We had more trouble with too much heat than cold till we got used to running it. The Vacuum keeps the cold air going down the outside and the heat up the center. As to fire risk, they are cooler in the cellar than any other heating plant that can be put in. We are well satisfied—like it so much better than a hard coal stove—there is no comparison. Expect to enjoy it more this winter than last as we have learned how to run it and will use less fuel."

A. H. BAUMAN, Hansen, Nebraska.

"I installed the Vacuum Pipeless Furnace in my eight room two story house. I am glad to say that the furnace has given splendid satisfaction. If any difference, it has done better than you recommended. We are delighted with it, both as a heater and a fuel saver."

O. R. RANDLE, Oklahoma City, Okla.

"In reply to your inquiry of the 14th inst. wish to say that the furnace you installed for us last Fall has given entire satisfaction. In fact, we are delighted. During the zero weather it kept all our offices and adjoining rooms warm and we could not allow all the gas turned on as it kept the offices too warm. The gas bills were surprisingly low, not being as much as with the gas stoves the winter before."

SLEDGE LUMBER CO., Ada, Okla.

"Relative to the Vacuum Pipeless Furnace which you installed in our nine room two story house, I am glad indeed to tell you that it was perfect in every way. As you know, the past winter was a very cold one for Oklahoma, possibly the coldest we have experienced during the twenty-five years I have resided in the state; however the Vacuum heated our large home perfectly."

M. T. FELKER, Ardmore, Okla.

Instructions for Setting Up VACUUM FURNACES

Models No. 122-124-126

READ CAREFULLY—Proceed in order as below.

CAUTION—Be sure that all joints are tightly sealed with furnace cement provided. Complaints of gas, smoke or dust are invariably caused by improperly made joints. See that every joint is carefully packed—that is important and will repay you by giving you a thoroughly satisfactory job.

REGISTER

1st. Locate REGISTER, which is directly over the furnace, placing the same in the most central location so as to allow the best distribution of air into the other rooms. The register should not be placed nearer than six inches to any wall or twelve inches from a corner.

BASE RING

2nd. Locate the furnace in the basement directly under the register, placing the base ring first.

ASH PIT

3rd. Now place the ashpit on the base as provided and use a plumb bob attached to the center of the register and adjust the base and ashpit so that the central point which is marked on the bottom of the ashpit, comes directly under the center of the register as indicated by the plumb bob.

GRATES

4th. Put the grates in position in the top of the ashpit, being sure to have the grates right side up—the upper part of the grate frame is flat and front cross-bar should be underneath shaker bars. Swing grates up in place and fasten with the hooks that are bolted to the inside of the ashpit.

FIRE POTS

5th. Place lower fire pot in position on top of ashpit first placing cement in the joint, then place the upper fire pot on top of the lower, placing cement in the joint first. Be sure and have the little cross-bar in the top joint channel of the upper fire pot at the front of the furnace so as to fit into the Feed section when set on top. Press the cement tightly into all joints in which it is used, then smooth it up after the casting is firmly nested in it.

ASH AND DAMPER PIPE

6th. Next place the ash damper in position on the ashpit casting, then place the galvanized dust pipe in position—after the front is placed in position, bolt the handle on, otherwise it will break off in placing the front in position.

FEED SECTION OR COMBUSTION DOME

7th. Place the feed section or combustion dome section on top of the fire pot, first carefully filling the joint with cement and smoothing it up after the casting is nested.

REPAIR PARTS OF VACUUM FURNACES

Nos. 122-124-126

In ordering repair parts always state number
furnace



- | | |
|---|--|
| 1—Front—Upper or Lower | 16—Grate Shaker. |
| 2—Base Ring. In two parts
on 126. | 17—Hinge Cleats for Feed
and Ash Doors. |
| 3—Ash Pit. | 18—Inner Casing Support. |
| 4—Ash Pit Bottom. | 19—Ash Damper. |
| 5—Radiator. | 20—Register. |
| 6—Fire Pots. | 21—Bottom Radiator Plate. |
| State whether upper or
lower pot wanted. | 22—Cleanout Collar. |
| 7—Feed Section. | 23—Key Frame. |
| 8—Pouch Plate. | 24—Check Damper and
Lid. |
| 9—Grate Frame. | 25—Smoke Collar. |
| 10—Grate Hook. | 26—Clean Out Door. |
| 11—Grate Cog. | 27—Feed Door (complete). |
| 12—Outer Grate Bar | 28—Ash Door. |
| 13—Regulator. | 29—Water Pan. |
| 14—Grate Yoke. | 30—Water Pan Lid. |
| 15—Inner Grate Bar. | 31—Draft Door. |

Address orders to your local dealer or
MOBRILL-HIGGINS CO., Manufacturers
1112 Douglas Street
Omaha, Nebraska

REPAIR PARTS OF VACUUM FURNACES

Nos. 122-124-126

In ordering repair parts always state number

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From the collection of Alan O'Bright

- 1—Front—Up
- 2—Base Ring.
on 126.
- 3—Ash Pit.
- 4—Ash Pit B
- 5—Radiator.
- 6—Fire Pots.
State wheel
- lower pot wa
- 7—Feed Sect
- 8—Pouch Pl
- 9—Grate Fra
- 10—Grate Ho
- 11—Grate Co
- 12—Outer Grate
- 13—Regulator.
- 14—Grate Yoke.
- 15—Inner Grate Bar.

- 16—Grate Shaker.
- 17—Hinge Cleats for Feed
and Ash Doors.
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DIRECTIONS FOR OPERATING THE VACUUM FURNACE

This furnace will burn coal or wood; in fact, anything that can be used in any heating appliance.

To start the fire see that the grate and ash pit are clean. Open draft door and build fire as in ordinary stove or furnace. After fire is burning fill fire-pot full and regulate by drafts the amount of heat wanted.

Never have both the main draft and check draft open at the same time.

To insure fire, close check damper and open draft door.

To decrease fire, close draft door and open check damper.

To keep fire at night, fill fire pot, close draft door, open slide in feed door and open check damper.

The drafts in some chimneys are not so strong as they might be and this will sometimes draw smoke into the cellar. This can be overcome by closing both drafts when firing.

Keep grate and ash pit free from ashes and clinkers at all times. Clean the radiator two or three times per season.

A furnace is the same as any piece of machinery, it requires a little attention to give efficient and economic service.

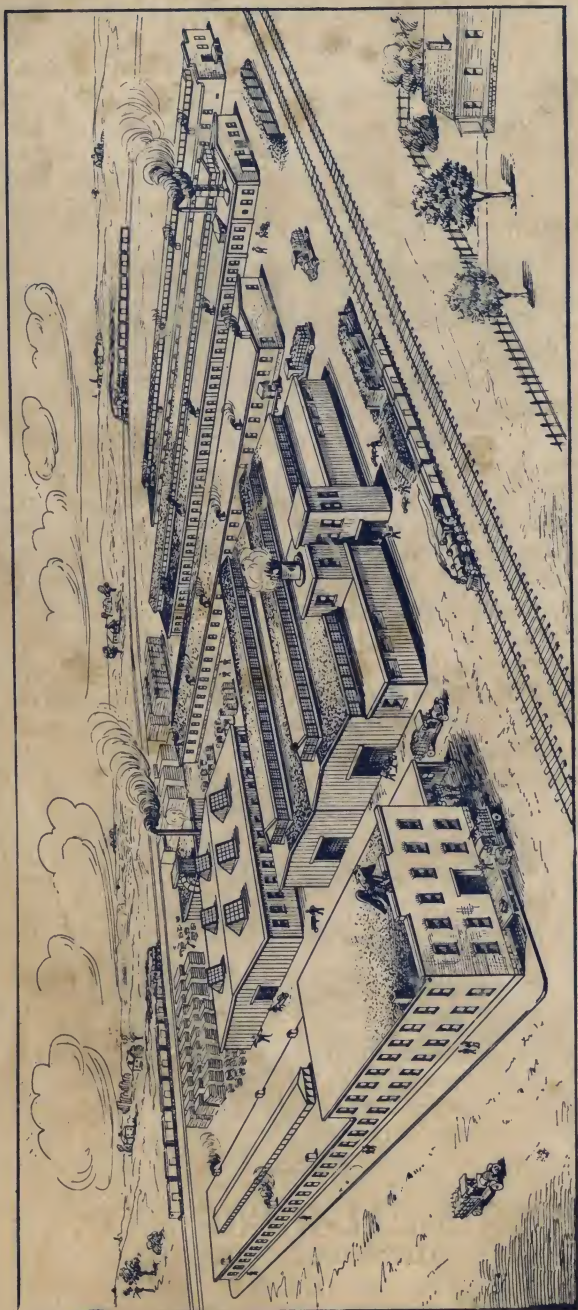
The name "VACUUM" is our trademark registered in the U. S. Patent office No. 101202.

The VACUUM Furnace is our own improved design, protected by U. S. Patents Nos. 1165122, 1171245. We will vigorously prosecute any infringers of either patents or trade mark.

MORRILL-HIGGINS CO.
1112 DOUGLAS STREET
OMAHA, NEB.

Sole Manufacturers

FOR PRICES SEE LOCAL AGENT OR WRITE.



VACUUM FURNACE FOUNDRY
Located at Belleville, Ill.

GENERAL OFFICES AT OMAHA, NEB.
Address All Communications to Omaha.